

European Energy Service Award 2019

Urban Energy Management Through Academic-Industry-Public Partnership

Technical University of Cluj-Napoca - Cluj-Napoca City Municipality - Center of Resources for Energy Efficiency and Climate Change



PRIMĂRIA ȘI CONSILIUL LOCAL
CLUJ-NAPOCA



TECHNICAL
UNIVERSITY
OF CLUJ-NAPOCA
ROMANIA



CREESC
CENTRUL DE RESURSE
PENTRU EFICIENȚĂ ENERGETICĂ
ȘI SCHIMBĂRI CLIMATICE

Description

Background | Initial Situation

Through an academic-industry-public partnership, the association of Technical University of Cluj-Napoca (TUCN) along with Center of Resources for Energy Efficiency and Climate Change (CREESC) and City Municipality of Cluj-Napoca started an ambitious Urban Energy Management project for the local community.

Challenge

To start and long term continue an ambitious Energy Management plan for Cluj-Napoca urban community, involving both the public local government, the academia and the private sector of buildings and energy professionals.

Solution | Measures

First, they elaborated and updated in the last 3 years the Energy Efficiency Programme for Cluj Municipality, with the following statistical key indicators: 3,500 GWh/year city energy use, out of which 12% public users. Actions were public communication of city energy impact, 7 editions of instruction, education and behavioural change workshops for public building administrators, coordination with the Energy Managers and Energy Action Plans of utility companies (district heating, transportation, water, energy, gas, waste) and scheduled sustainable investments, out of which 11,2 million € was already invested in 4 public buildings major renovation, with an impact of 9,400 MWh per year energy saving and 3,300 tons per year of CO₂ avoided emissions. In 2018, 11 electrical buses started to be used in the public transportation with a great success and around 60% energy savings and avoided CO₂ emissions.



Cluj -Napoca and Public Bulidings / Cluj



The project is due to the effort of the local transportation company and City Municipality, with the financial support of Swiss funds. TUCN provided during 2016-2018 a post-graduate course on nZEB concept for private & public sector professionals (around 180 people) – architects, engineers, building administrators etc. – within MENs Horizon 2020 project and another Energy Managers for local communities and buildings post graduate course for the nearby local communities and Cluj universities representatives.

Results

Cluj Municipality has 5 Energy Managers in the Energy Efficiency Office. 208 public buildings were evaluated and Cluj Municipality imposed new standards in deep renovation, not only bring energy efficiency, but also to significantly increase of comfort. For every renovation we imposed not only resume the EE to the envelope insulation, but also incorporate ventilation, adaptive lighting, renewable energy and nZEB KPIs to be achieved.

The public building Administrators gained new competencies through the 7 educational session, and yet others to come, brought by TUCN staff and CREESC experts. Increase of comfort in buildings – indoor air quality, adapted lighting and thermal comfort.

Key Results

Total investment:	11.2 million €
Energy savings:	9,400 MWh / year
Reduction of CO₂ emissions:	3,300 tons / year

Contact

Andrei CECLAN

Phone: +40 | 728 932 290

E-Mail: Andrei.Ceclan@ethm.utcluj.ro

www.guarantee-project.eu



Disclaimer:
The sole responsibility for the content of this publication lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EASME nor the European Commission are responsible for any use that may be made of the information contained therein.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 696040.